Swimming Pools

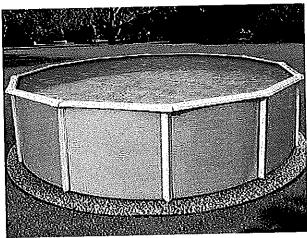
Permit Information & Requirements

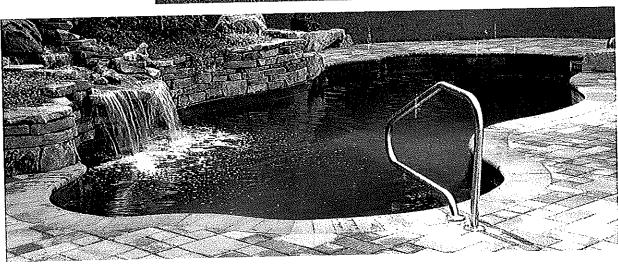
Needed for Swimming Pool Permit Apps:

Part 1: Planning & Zoning Approval

Part 2: Building Permit Application Including:

- Details of pool in ground or above ground w/ specifications.
- In ground pools will require engineered drawings typically provided by pool manufacturer
- For above ground pools; details of pool ladder with picture. For in ground pools; specifications of enclosure or fencing for purposes of ensuring barrier compliance.
 - Proof of purchase of pool alarm with specifications & picture.
 - Pool license & insurance information for company
- If building a pool deck; detailed drawings and deck construction details must be included and permitted by both P&Z Department and Building Department.





R326.1 <u>Gottorali</u>. The provisions of this section *shall* control the design and construction of *swimming pools*, spas and hot tubs installed in or on the *lot* of a *one- or two-family dwelling*. R326.2 Pools in flood hazard areas. Pools that are located in *flood hazard areas* established by Table R301.2(1), including above-ground pools, on-ground pools and in-ground pools that involve placement of fill, *shall* comply with Section R326.2.1 or R326.2.2. Exception: Pools located in riverine *flood hazard areas* which are outside of designated *floodways*.

R326.2.1 Pools located in designated floodways. Where pools are located in designated floodways, documentation shall be submitted to the building official which demonstrates that the construction of the pool will not increase the design flood elevation at any point within the jurisdiction.

R326.2.2 Pools located where floodways have not been designated. Where pools are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

R326.3 <u>Definitions</u>. For the purposes of these requirements, the terms used *shall* be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. See "Swimming pool."

BARRIER. A fence, wall, *building* wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

HOT TUB. See "Swimming pool,"

IN-GROUND POOL. See "Swimming pool."

RESIDENTIAL. That which is situated on the premises of a detached *one- or two-family dwelling*, or a one-family *townhouse* not more than three stories in height where the pool is intended to be used by the *owners* and invited guests.

SPA. A product intended for the immersion of persons in temperature-controlled water circulated in a closed system and not intended to be drained and filled with each use. A spa usually includes a filter; an electric, solar or gas heater; a pump or pumps; and a control and can also include other equipment, such as lights, blowers, and sanitizing equipment.

SPA, EXERCISE (Also known as a swim spa). Variants of a spa in which the design and construction includes specific features and equipment to produce a water flow intended to allow recreational physical activity including, but not limited to, swimming in place. *Exercise spas* can include peripheral jetted seats intended for water therapy, heater, circulation and filtration system, or can be a separate distinct portion of a combination spa*lexercise spa* and can have separate controls. These spas are of a design and size such that they have an unobstructed volume of water large enough to allow the 99th Percentile Man as specified in APSP 16 to swim or exercise in place.

SPA, NONPORTABLE. See "Swimming pool."

SPA, PORTABLE. A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water more than 24 inches (610 mm) deep.

SWIMMING POOL, INDOOR. A swimming pool that is totally contained within a structure and surrounded on all four sides by the walls of the enclosing structure.

SWIMMING POOL, OUTDOOR. Any swimming pool that is not an indoor pool.

R326.4 Swimming pools. Swimming pools shall be designed and constructed in accordance with Sections R326.4.1 through R326.4.3.

R326.4.1 In-ground pools. In-ground pools shall be designed and constructed in compliance with APSP 5.

R326.4.2 Above-ground and on-ground pools. Above-ground and on-ground pools *shall* be designed and constructed in compliance with APSP 4.

R326.4.3 Pools in flood hazard areas. In flood hazard areas established by Table R301.2(1), pools in coastal high-hazard areas shall be designed and constructed in compliance with ASCE 24.

R326.5 Spas and hot tubs. Spas and hot tubs *shall* be designed and constructed in accordance with Sections R326.5.1 and R326.5.2.

R326,5.1 Permanently installed spas and hot tubs. Permanently installed spas and hot tubs shall be designed and constructed in compliance with APSP 3.

R326.5.2 Portable spas and hot tubs. Portable spas and hot tubs *shall* be designed and constructed in compliance with APSP 6.

R326.6 Barrier requirements. The provisions of this section shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs.

R326.6.1 Outdoor swimming pool. An outdoor swimming pool, including an in-ground,

above-ground or on-ground pool, hot tub or spa, shall be surrounded by a barrier which shall comply with the

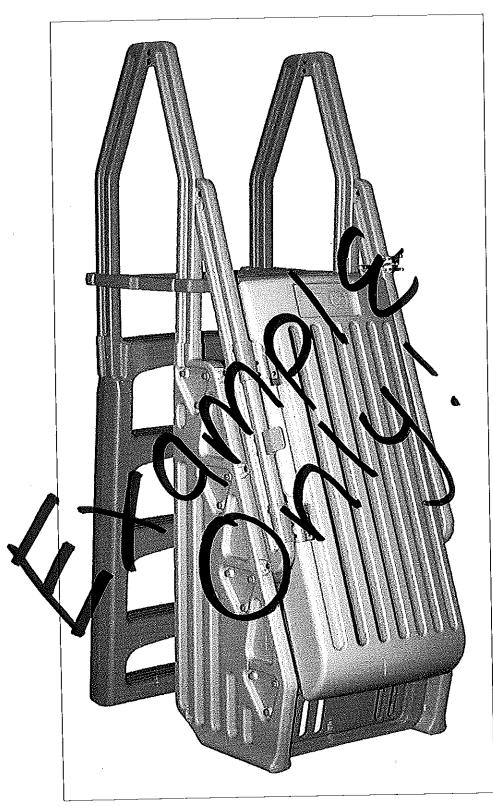
1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

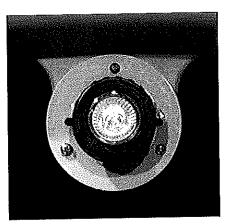
2. Openings in the barrier shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

- 3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions, except for normal construction tolerances and tooled masonry joints.
- 4. Where the barrier is composed of horizontal and vertical members, and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.-inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 .-inches (44 mm) in width.
- 5. Where the barrier is composed of horizontal and vertical members, and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.-inches (44 mm) in width.
- 6. Maximum mesh size for chain link fences shall be a 21/4-inch (57 mm) square, unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1.-inches (44 mm).
- 7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1. inches
- 8. Access gates shall comply with the requirements of Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool, and shall be self-closing and have a self-latching device. Gates, other than pedestrian access gates, shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:
- 8.1 The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and 8.2 The gate and barrier shall have no opening larger than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.
- 9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:
- 9.1 The pool shall be equipped with a powered safety cover in compliance with ASTM F1346;
- 9.2 Doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or 9.3 Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described herein.
- 10. Where an above-ground or on-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, the ladder or steps shall be surrounded by a barrier that meets the requirements of Section AG105.2, Items 1 to 9, inclusive.
- R326.6.2 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Item 9 of Section R326.6.1.
- R326.6.3 Barrier perimeter clearance. The required barrier height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier, free of structures, equipment or similar objects.
- R326.6.4 Barrier exceptions. Spas or hot tubs with a safety cover which comply with ASTM F1346 shall be exempt from the provisions of this chapter.



MODEL CE COMBO ENTRY with GATE





ADD AN IN-POOL LIGHT TO ENHANCE THE POOL ENVIRONMENT (sold separately)

FEATURES & SPECS

- Combo step entry for easy climbing (step outside pool)
- Self-closing, self-latching & lockable gate for safety & to meet code requirements
- Adjustable from 48" to 56" with 12" top rail clearance
- Minimal obstruction in pool
- Optional 12 volt in-pool light available
- Double, extended handrails on both sides for ease of climbing
- Anti skid treads & platform for safe entry & exit
- Easy assembly
- Maintenance free resin to maintain strength & color
- Stainless steel hardware
- Can be used with our resin pool fencing to totally enclose & protect pool

Visit our website for further product information





Open until 10PM! Cromwell Lowe's ∨ Prices, promotions, styles, and availability may vary. Our local stores do not honor online pricing. Prices and availability of products and services are subject to change without notice. Errors will be corrected where discovered, and Lowe's reserves the right to revoke any stated offer and to correct any errors, inaccuracies or omissions including after an order has been submitted.

Item # 176735 Model # S187D

TECHKO Pool Entry Gate Alarm

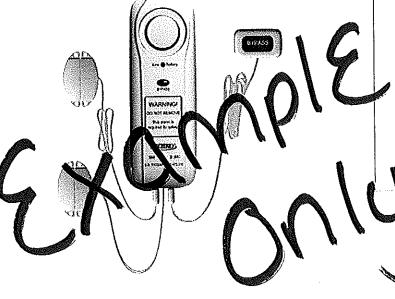
14 Ratings ★★★☆☆ 3,5 Average 62%

Recommend this product



\$31.98

- Meets UL 2017 standards for child pool safety law
- · Can be utilized on most doors and windows
- · Easy installation for gate, door or window protection



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Product Information

: (i) Description

Protect your pool area with the Techko safe pool entry alarm S187D. The magnetic sensors will sound when a door or gate to your pool area is opened. Ideal for child safety as it is always on and alarmed. The bypass button allows for adults to pass through within 8--12 seconds without sounding the alarm. This pool alarm comes with an extra sensor for double doors (such as screen door + sliding glass door) and an extra bypass button for the other side of the door or gate. The unit comes with a kit for mounting on a

- · Meets UL 2017 standards for child pool safety law
- · Can be utilized on most doors and windows
- Easy installation for gate, door or window protection
- · Water/weather resistant

Q CHAT WITH LOWE'S

(I)

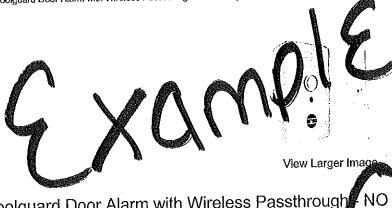
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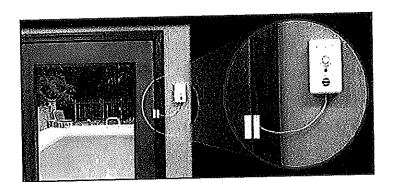
Poolguard Door Alarm with Wireless Passthrough

Item#: DAPT-WT

POOLGUARD DOOR ALARM WITH WIRELESS FEATURE

1 Year Warranty Complies with all building codes Loud 85dB horn (at 10 feet)

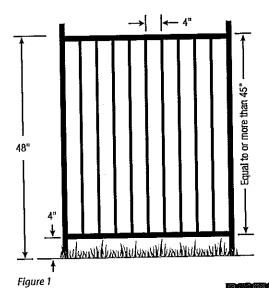
- . The Door Alarm will sound immediately when a child opens the door, and will continue to sound if the door is left open. If a child goes through the door and closes it, the alarm will sound for 5 minutes and then automatically reset.
- Poolguard Door Alarm Model DAPT-WT is equipped with an Outdoor Wireless Transmitter that allows adults to enter the home from the outside without the alarm sounding and is easy to install.
- The Door Alarm is always on and will automatically reset under all conditions.
- Poolguard Door Alarm is equipped with an adult pass through feature that will allow adults to go through the door without the alarm sounding.
- Optional screen door kits (ShowProduct.aspx?ProductID=6682) can be purchased for the alarm, this kit allows you to get air through your screen door without the alarm sounding.
- Poolguard Door Alarm uses one 9-volt battery, (not included) with a battery life of approximately 6 months.
- The Door Alarm is equipped with a low battery indicator that will audibly alert you when your battery is getting low.
- Poolguard is the only door alarm that is UL listed under UL 2017 for water hazard entrance alarm equipment.



A successful pool barrier prevents a child from getting OVER, UNDER, or THROUGH and keeps the child from gaining access to the pool except when supervising adults are present.

How To Prevent a Child from Getting OVER a Pool Barrier

A young child can get over a pool barrier if the barrier is too low or if the barrier has handholds or footholds to use when climbing. The top of a pool barrier should be at least 48 inches above grade, measured on the side of the barrier which faces away from the swimming pool. Some states, counties or municipalities require pool barriers of 60 inches.



Eliminate handholds and footholds and minimize the size of openings in a barrier's construction.

For a Solid Barrier

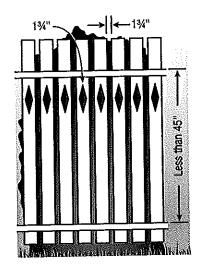
No indentations or protrusions should be present, other than normal construction tolerances and masonry joints.



Figure 2

For a Barrier (Fence) Made Up of Horizontal and Vertical Members

If the distance between the top side of the horizontal members is less than 45 inches, the horizontal members should be on the swimming pool side of the fence.



The spacing between vertical members and within decorative cutouts should not exceed 1¾ inches. This size is based on the foot width of a young child and is intended to reduce the potential for a child to gain a foothold and attempt to climb the fence.

Figure 3

If the distance between the tops of the horizontal members is more than 45 inches, the horizontal members can be on the side of the fence facing away from the pool. The spacing between vertical members should not exceed 4 inches. This size is based on the head breadth and chest depth of a young child and is intended to prevent a child from passing through an opening. If there are any decorative cutouts in the fence, the space within the cutouts should not exceed 1¾ inches.

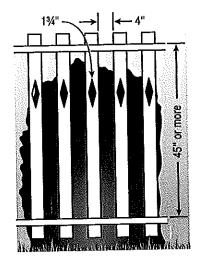
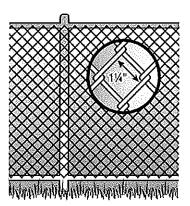


Figure 4

For a Chain Link Fence

The mesh size should not exceed 11/4 inches square unless slats, fastened at the top or bottom of the fence, are used to reduce mesh openings to no more than 1¾ inches.



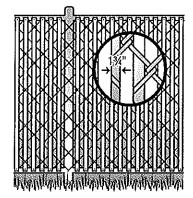


Figure 5

Figure 6

For a Fence Made Up of Diagonal Members or Latticework

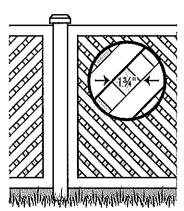


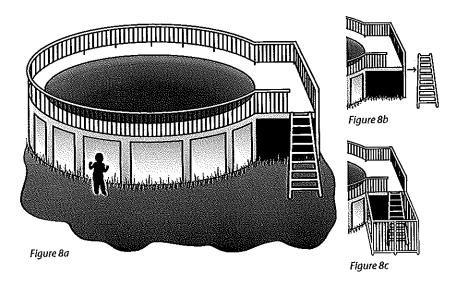
Figure 7

The maximum opening in the lattice should not exceed 1¾ inches.

For Above Ground Pools

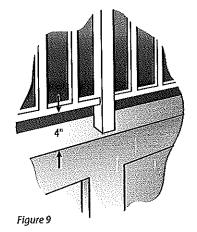
Above ground pools should have barriers. The pool structure itself serves as a barrier or a barrier is mounted on top of the pool structure.

There are two possible ways to prevent young children from climbing up into an above ground pool. The steps or ladder can be designed to be secured, locked or removed to prevent access, or the steps or ladder can be surrounded by a barrier such as those described in these guidelines



Above Ground Pool with Barrier on Top of Pool

If an above ground pool has a barrier on the top of the pool, the maximum vertical clearance between the top of the pool and the bottom of the barrier should not exceed 4 inches.



How to Prevent a Child from Getting UNDER a Pool Barrier

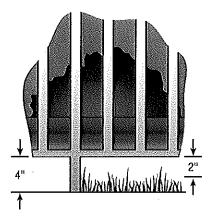


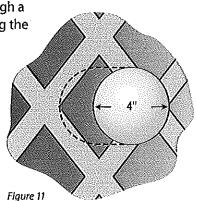
Figure 10

For any pool barrier, the maximum clearance at the bottom of the barrier should not exceed 4 inches above the surface or ground when the measurement is done on the side of the barrier facing away from the pool. Industry recommends that if the bottom of the gate or fence rests on a non-solid surface like grass or gravel, that measurement should not exceed 2 inches.

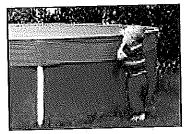
How to Prevent a Child from Getting THROUGH a Pool Barrier

Preventing a child from getting through a pool barrier can be done by restricting the sizes of openings in a barrier and by using self-closing and self-latching gates.

To prevent a young child from getting through a fence or other barrier, all openings should be small enough so that a 4-inch diameter sphere cannot pass through. This size is based on the head breadth and chest depth of a young child.



Portable Pools



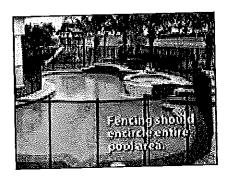


Portable pools are becoming more popular. They vary in size and height, from tiny blow-up pools to larger thousands-of-gallons designs. Portable pools present a real danger to young children.

Never leave children unsupervised around portable pools. It is recommended that portable pools be fenced, covered or emptied and stored away. Instruct neighbors, friends and caregivers about their presence and the potential dangers of a portable pool in your yard.

Removable Mesh Fences

Mesh fences are specifically made for swimming pools or other small bodies of water. Although mesh fences are meant to be removable, the safest mesh pool fences are locked into the deck so that they cannot be removed without the extensive use of tools.

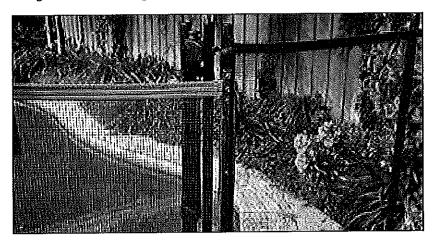


Like other pool fences, mesh fences should be a minimum of 48" in height. The distance between vertical support poles and the attached mesh, along with other manufactured factors, should be designed to hinder a child's ability to climb the fence. The removable vertical support posts should extend a minimum of 3 inches below grade and they should be spaced no greater than 40 inches apart. The bottom of the mesh barrier should not be more than 1 inch above the deck or installed surface.

For more information on Removable Mesh Fencing see ASTM standard F 2286 – 05.

Gates

There are two kinds of gates which might be found on a residential property: pedestrian gates and vehicle or other types of gates. Both can play a part in the design of a swimming pool barrier. All gates should be designed with a locking device.



Pedestrian Gates

These are the gates people walk through. Swimming pool barriers should be equipped with a gate or gates which restrict access to the pool.

Gates should open out from the pool and should be self-closing and self-latching. If a gate is properly designed and not completely latched, a young child pushing on the gate in order to enter the pool area will at least close the gate and may actually engage the latch.



The weak link in the strongest and highest fence is a gate that fails to close and latch completely. For a gate to close completely every time, it must be in proper working order.

When the release mechanism of the self-latching device on the gate is less than 54 inches from the bottom of the gate, the release mechanism for the gate should be at least 3 inches below the top of the gate on the side facing the pool. Placing the release mechanism at this height prevents a young child from reaching over the top of a gate and releasing the latch.

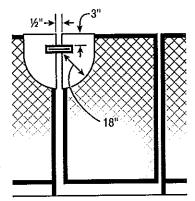


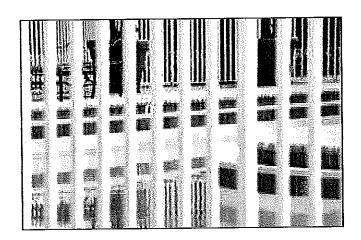
Figure 13

Also, the gate and barrier should have no opening greater than 1/2 inch

within 18 inches of the latch release mechanism. This prevents a young child from reaching through the gate and releasing the latch.

All Other Gates (Vehicle Entrances, Etc.)

Other gates should be equipped with self-latching devices. The self-latching devices should be installed as described for pedestrian gates.



When the House Forms Part of the Pool Barrier

In many homes, doors open directly from the house onto the pool area or onto a patio leading to the pool. In such cases, the side of the house

leading to the pool is an important part of the pool barrier. Passage through any door from the house to the pool should be controlled by security measures.

The importance of controlling a young child's movement from the house to pool is demonstrated by the statistics obtained in CPSC's submersion reports. Residential locations dominate in incidents involving children younger than 5 accounting for 85% of fatalities and 54 percent of injuries (from CPSC's 2012 Pool and Spa Submersion Report, see page 3).



Figure 14

Door Alarms

All doors that allow access to a swimming pool should be equipped with an audible alarm which sounds when the door and/or screen are opened. Alarms should meet the requirements of UL 2017 General-Purpose Signaling Devices and Systems, Section 77 with the following features:

- Sound lasting for 30 seconds or more within 7 seconds after the door is opened.
- The alarm should be loud: at least 85 dBA (decibels) when measured 10 feet away from the alarm mechanism.
- The alarm sound should be distinct from other sounds in the house, such as the telephone, doorbell and smoke alarm.
- The alarm should have an automatic reset feature to temporarily deactivate the alarm for up to 15 seconds to allow adults to pass through house doors without setting off the alarm. The deactivation switch could be a touchpad (keypad) or a manual switch, and should be located at least 54 inches above the threshold and out of the reach of children.

Self-closing doors with self-latching devices could be used in conjunction with door alarms to safeguard doors which give access to a swimming pool.

Pet or Doggy Doors

Never have a pet or doggy door if the door leads directly to a pool or other backyard water. An isolation barrier or fence is the best defense when pet doors are installed. Remember, pet door openings, often overlooked by adults, provide curious children with an outlet to backyard adventure. Locking these doors is not sufficient and could lead to accidents and tragedies. Children regularly drown in backyard pools, which they were able to access through pet doors. Some municipalities have building codes that prohibit doggy doors in homes with pools unless there is an isolation fence around the pool.

Power Safety Covers

Power safety covers can be installed on pools to serve as security barriers, especially when the house serves as the fourth wall or side of a barrier. Power safety covers should conform to the specifications in the ASTM F 1346-91 standard, which specifies safety performance requirements for pool covers to protect young children from drowning.

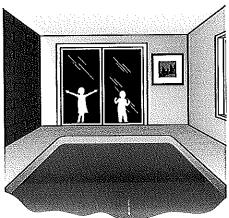


Figure 15

Indoor Pools

When a pool is located completely within a house, the walls that surround the pool should be equipped to serve as pool safety barriers. Measures recommended for using door alarms, pool alarms and covers where a house wall serves as part of a safety barrier also apply for all the walls surrounding an indoor pool.

Barriers for Residential Swimming Pool, Spas, and Hot Tubs

The preceding explanations of CPSC's pool barrier guidelines were provided to make it easier for pool owners, purchasers, builders, technicians, and others to understand and apply the guidelines to their particular properties or situations. Reading the following guidelines in conjunction with the diagrams or figures previously provided may be helpful. For further information, consult your local building department or code authority.

Outdoor Swimming Pools

All outdoor swimming pools, including inground, above ground, or onground pools, hot tubs, or spas, should have a barrier which complies with the following:

- 1. The top of the barrier should be at least 48 inches above the surface measured on the side of the barrier which faces away from the swimming pool (figure 1).
- 2. The maximum vertical clearance between the surface and the bottom of the barrier should be 4 inches measured on the side of the barrier which faces away from the swimming pool. In the case of a non-solid surface, grass or pebbles, the distance should be reduced to 2 inches, and 1 inch for removable mesh fences (figures 1 and 10).
- 3. Where the top of the pool structure is above grade or surface, such as an above ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier should be 4 inches (figure 9).
- 4. Openings in the barrier should not allow passage of a 4-inch diameter sphere
- 5. Solid barriers, which do not have openings, such as a masonry or stone wall, should not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints (figure 2).
- 6. Where the barrier is composed of horizontal and vertical members and the distance between the bottom and top horizontal members is less than 45 inches, the horizontal members should be located on the swimming pool side of the fence (figure 3).
- 7. Spacing between vertical members should not exceed 1¼ inches in width. Where there are decorative cutouts, spacing within the cutouts should not exceed 1¾ inches in width (figure 4).
- 8. Maximum mesh size for chain link fences should not exceed 1¼ inch square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to no more than 1¾ inches (figures 5 and 6).
- 9. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members should be no more than 134 Inches (figure 7).
- 10. Access gates to the pool should be equipped with a locking device, Pedestrian access gates should open outward, away from the pool, and should be self-closing and have a self-latching device (figure 12). Gates other than pedestrian access

gates should have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate,

- (a) the release mechanism should be located on the pool side of the gate at least 3 inches below the top of the gate and
- (b) the gate and barrier should have no opening greater than ½ inch within 18 inches of the release mechanism (figure 13).
- 11. Where a **wall of a dwelling** serves as part of the barrier, one of the following should apply:
 - (a) All doors with direct access to the pool through that wall should be equipped with an alarm which produces an audible warning when the door and its screen, if present, are opened. Alarms should meet the requirements of UL 2017 General-Purpose Signaling Devices and Systems, Section 77. For more details on alarms, see page 13.
 - (b) The pool should be equipped with a *power safety cover* which complies with ASTM F1346-91 listed below.
 - (c) Other means of protection, such as **self-closing doors with self-latching devices**, are acceptable so long as the degree of protection afforded is not less than the protection afforded by (a) or (b) described above.
- Where an above ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps (figure 8a), then
 - the ladder to the pool or steps should be capable of being secured, locked or removed to prevent access (figure 8b), or
 - (b) the ladder or steps should be surrounded by a barrier (figure 8c). When the ladder or steps are secured, locked, or removed, any opening created should not allow the passage of a 4 inch diameter sphere.

For more information on

Fencing:

- ASTM F 1908-08 Standard Guide for Fences for Residential Outdoor Swimming Pools, Hot Tubs, and Spas: http://www.astm.org/Standards/F1908.htm
- ASTM F 2286-05 Standard Design and Performance Specifications for Removable Mesh Fencing for Swimming Pools, Hot Tubs, and Spas: http://www.astm.org/ Standards/F2286.htm

Covers:

ASTM F 1346-91 Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs: http://www.astm.org/Standards/F1346.htm

Note: ASTM Standards are available for a fee. You may want to contact a pool contractor.

And:

- ASTM Standards, contact ASTM online at: http://www.astm.org/CONTACT/ Index.html
- UL (Underwriters Laboratories) Relevant Pool and Spa Standards http://www.ul.com/global/eng/pages/, look for Life Safety and Security Product

Cross-section – Multi-level Decks & Pool

